

Appln. No. 10/826,789
Respose to Election

AMENDMENTS TO THE CLAIMS

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Listing of claims:

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This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1 (original): In combination with a bioreactor having an axially elongated housing within which biofilm growth on microscope slides and beads is effected and evaluated within the housing; the improvement residing in: holder means for retaining at least one slide within the bioreactor housing to avoid disruption of growth of the biofilm on the beads therein, and wherein the holder means is inserted, retained and retraction from the bioreactor in order to remove a slide therefrom.

Claim 2 (original): The combination as defined in claim 1, further including actuating means for extending into the holder means for retraction of the holder means from the bioreactor.

Claim 3 (original): The combination as defined in claim 1, further including a port means connected to the bioreactor for evaluation of the biofilm without disruption of the biofilm.

Claim 4 (original): The combination as defined in claim 1, including: an inlet means connected to a test chamber of the housing for aeration, an inlet means connected to a test chamber of the housing for infeed of nutrients and an outlet means.

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Claim 5 (original): The combination as defined in claim 1, wherein the axially elongated housing of the bioreactor has a length to width ratio of a magnitude to aerate the slides and beads, wherein the ratio is of from 10:1 to about 5:1.

Claim 6 (original): The combination as defined in claim 1, wherein the surface area to volume is obtained between surface area of a housing chamber in the bioreactor, on the slides and on the beads, and volume of a quantity of liquid in the housing chamber; and wherein said surface area to volume is at least 10 square cm per 1 ml.

Claim 7 (original): In combination with a bioreactor having an axially elongated housing within which biofilm growth on slides and beads is effected; the improvement residing in: mid-housing section for retention of the slides within the housing to enhance said growth of the biofilm thereon.

Claim 8 (original): The combination as defined in claim 7, further including an inlet port for aeration flow, an inlet port for liquid and an outlet port.

Claim 9 (original): The combination as defined in claim 8, further including an inlet port for withdrawing a fluid sample for evaluation.

Claims 10-11 (canceled)

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Claim 12 (new): A bioreactor arrangement comprising:

an axially elongated housing having a length to width ratio of about 10:1 to about 5:1;

one or more slides for holding biofilm growth positioned within the elongated housing;

and

a rectangular holder removeably positioned within the elongated housing for retaining said one or more slides.

Claim 13 (new): The bioreactor arrangement of claim 12, further comprising:

a sealable top end portion at an upper end of the axially elongated housing; and

at least one actuator within the elongated housing, protruding above the sealable top end portion and extending through the rectangular holder.

Claim 14 (new): The bioreactor arrangement of claim 13, wherein the rectangular holder comprises a bottom portion with a threaded opening, and the at least one actuator comprises a rod having a threaded end, wherein the threaded end of the rod is threadedly inserted into the threaded opening in the bottom portion of the rectangular holder.

Claim 15 (new): The bioreactor arrangement of claim 14, further comprising:

an aeration inlet port;

a feed supply inlet port;

a testing inlet port; and

an outlet port.